

## **Qualitative and Quantitative Approaches to the Study of Poverty: Taming the Tensions and Appreciating the Complementarities**

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*There is a germane relationship between qualitative and quantitative approaches to social science research. The relationship is empirically and theoretically demonstrated by poverty researchers. The study of poverty, as argued in this article, is a study of both numbers and contextualities. This article provides a general overview of qualitative and quantitative approaches to poverty studies and argues that only a combination of the two approaches, where necessary, would provide a robust, rich and reliable data for researching issues of poverty. Hence, the contemporary drive towards a mixed methods approach in poverty research is not only welcomed but certainly timely as well. Thus, understanding ontological and epistemological paradigms about social sciences is imperative in dousing such tensions. Key Words: Qualitative Research, Quantitative Research, Mixed Method Approach, Philosophical Assumptions.*

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Historically, poverty has always been an issue continuously attracting attention of citizens and governments. Today, its question has even been an issue of international concern to both developed and developing states. This is not to argue that poverty levels among these countries are the same. Of course, huge variations exist. The developed industrial societies are concerned about the increasing gap being created by the contradictions of capitalist political economy, the consequence of which is poverty, frustrations and other attendant repercussions. They are also concerned about global poverty because of its tendency for spillover effects. Increasing poverty level in Third World societies will continue to increase the rate of immigration to developed societies. On the other side of the argument, the developing societies are concerned with poverty because of its destructive effects on the socio-economic and political conscience of the state. That is perhaps why so much effort has been put in addressing the scourge of poverty. These range from seminars, conferences, workshops and introduction courses at universities and research centres at both local and international levels in order to research and study poverty in all its ramifications – causes, patterns, natures, consequences, eradication strategies, policy sustainability, policy formulation, implementation and evaluation and so on. Within these themes and issues, there are also the questions of the indices of poverty. The best way, therefore, to study poverty and address all issues associated with it, as highlighted here, is to research about it totally, effectively, and comprehensively. That “best ways” of studying poverty are a function of one’s philosophical orientation(s) about the origin of knowledge.

In any case, studying poverty is an exclusive preserve of social scientists. Divergent views and opinions concerning the philosophical orientations influence why and how individual researchers select/choose research approaches and methodologies.

Social science researchers and indeed poverty scholars are often confronted with tensions of choosing the “best ways” based on their individual philosophical orientations to study social reality. This indisputably informs the differences and disagreements regarding the conceptions of social reality and how it is researched and reported. The aim of this paper is not to resolve these controversies but essentially to examine the very tensions generated by the seemingly dichotomous treatment and application of the two approaches. In other words, the contention of this paper is that applying the two dominant methodological approaches to poverty research separately, not only creates problems, it also relatively undermines data robustness thereof through a critical examination of the two dominant approaches to social science research – qualitative and quantitative. This is done through identification of areas of tension. The paper conclusively argues that there is no “best way” of studying poverty. To demonstrate that one’s approach and conceptualisation is the “best” is to explain and justify on the basis of philosophical orientation, conception of social reality and of course, the contextual characteristics of the phenomenon being researched and studied. Despite their inherent tensions, both approaches have considerable contributions to make to further understanding of poverty, help in formulating poverty reduction strategies, policies, interventions, and in evaluating such policies (Bogue, 2006; Jeanty & Hibel, 2011; Smit, 2003).

To achieve this objective, the paper is structured as follows. Following this introduction, the next section provides an overview of the philosophical underpinnings and orientations of social science research. Section three critically examines the generic tensions and problems associated with employing quantitative and qualitative research methods separately. Section four modestly suggests the use of a combination of the two approaches simultaneously to douse these tensions and as a way of improving the quality of poverty research exercises.

### **Philosophical Orientations: The Compass of Research Agenda**

Social science research is replete with controversies and disagreements over what may appear to be simple conceptualisations of social and political phenomena. Thus, making a decision regarding how to study the social world has always raised a number of fundamental philosophical debates. The debate revolves around the issues of “ontology” which denotes “beliefs about what is there to know about the world” (Ritchie & Lewis, 2005, p. 11). The main ontological questions, according to Ritchie and Lewis (2005) include: whether or not social reality exists independently of human conceptions and interpretation; whether there is a common-shared-social reality or just multiple context-specific realities; and whether or not social behaviour is governed by “laws” that can be seen as immutable or generalisable. In similar parlance, Nørgaard (2008) unequivocally further questioned that is it really possible to establish common standards for good social science research. Do such decisions about standards not merely become a positioning of certain perspectives on the philosophy of science, ontology, and epistemologies? Broadly speaking, all of these and similar questions

[...] relate to the standard debate for and against inductive and deductive research strategies; for and against quantitative analysis techniques in relation to qualitative techniques; depth vs. breadth; interpretation vs.

explanation; the ideographic ideal vs. the nomothetic idea; for and against case studies; in other words, the unending and impossible *Methodenstreit* in one of its numerous manifestations. (Nørgaard, 2008, p. 1)

Although these methodological and philosophical issues can create tension due to methodological dilemmas, they can also serve as the basis for addressing such apprehensions. Importantly, it helps in avoiding being trapped into self-delusion, where

Sometimes the verbal substitutions masquerading as contributions to knowledge are so inept and gross that it is difficult to believe that the authors really think that they are revealing new truths (which must be the case), and that they are not laughing up their sleeves at the gullibility of their audience. (Andreski, 1974, p. 64)

These are the problems. Every researcher is confronted with this monster. Critical understanding of one's ontological and epistemological perspectives is the beginning of a tactical confrontation with the monster. For example, Marsh and Furlong (2002) argue that each social scientist's orientation to his/her research or subject discipline is shaped by his/her ontological and epistemological position. These positions either implicitly or explicitly shape approach to theory and the methods employed by his/her students. These issues "are like a skin not a sweater: they cannot be put on and taken off whenever the researcher sees fit" (Marsh & Furlong, 2002, p. 17). Thus all poverty and other social science research students *must* be able to recognise and acknowledge their own individual ontological and epistemological positions and *must* be able to defend these positions against the critiques of others. This is the simple reason why such students should be able to conduct a very good research study that provides new insights and contributes to policy, theory building and/verification.

Ontological positions and questions deal with the nature of being and of its very existence. The concern is whether there is a "real" world "out there" that is different and independent of the world of the researcher. For instance, are there any essential differences between genders, social classes, or races (Marsh & Furlong, 2002)? In particular, it would enable students researching and studying poverty to ask and disaggregate questions relating to the concept of poverty, causes and consequences of poverty, absolute and relative poverty, measuring poverty, policies on poverty eradication (formulations, implementation and evaluations), and variations in poverty among genders, household and urban-rural, and so on. For example, Chambers (2006) argues that any definition(s) of poverty depends on who asks the question, how it is understood, and who responded to it. In other words, the definition of poverty is to "reflect our power to make definitions according to our perceptions" (Chambers, 2006, p. 3). This is because understanding of poverty is shaped politically by ideological orientation, context, and in particular by ontological positions. In addition to the above, ontological positions concerning poverty issues would help in choosing suitable research methods and in building theories of poverty. For example, an ontological assumption of a poverty researcher would help in establishing and appreciating the differences in relative and absolute poverty between urban and rural dwellers, between developed and developing societies, between male and female genders, and so on.

As ontological positions demonstrate researchers' view about the nature of social reality, the epistemological position on the other hand reflects their opinion of what can be known about the world and how it can be studied. In fact, the main concern of epistemology is to understand social reality, to take a position, and to identify ways of studying it. For example, a particular researcher may argue that there is no such thing as "real" world existing independent of the conception and meaning actors attached to their actions and inactions. Thus, this kind of view would apparently suggest that no researcher can be "objective," because he/she lives in a social world and is affected by the social construction of reality. The second related epistemological issue is if a researcher can establish relationships between social phenomena, can it be done through direct observation or are there some relationships which can be directly observed? Hence, answers to these questions shape a researcher's epistemological position concerning the best methods of studying a "real" relationship existing in a social reality. However, the best way to understand and to classify epistemological positions *vis-à-vis* ontology is to note the dichotomy between positivist and interpretivist positions. The debate about this disagreeable distinction revolves around the scientific nature of different epistemological positions. Understanding these varied ontological, epistemological positions and their accompanied philosophical orientations (positivism, interpretivism and critical social science) provide the *compass* for steering the ship of a good research exercise on all aspects of poverty.

This orientation is disaggregated within the popular debate concerning the *scientificness* of social science research (Bassey, 2000). In other words, these epistemological and philosophical approaches are important compasses of locating one's position in the ocean of poverty research activities. The three philosophical views can be distinguished by different methods that each employ in collecting and interpreting data and arriving at conclusions. These philosophical views are positivism, interpretivism, and critical social science.

### **Positivists' Approach**

Positivism dominated social science research for a long time until the recent emergence of critical social science. Guba and Lincoln (1994) argue that positivism is rooted in the ontological assumption of objective reality. Positivism is concerned with variables, which embrace a number of assumptions about the social world and how it should be investigated. It assumes that (a) the social world can be studied in the same way as the natural world; (b) there is complementary unity of method between the natural and the social world; and (c) the social world can be value-free.

Positivism is logically connected to pure scientific laws and based on facts in order to satisfy the four requirements of falsifiability, logical consistency, relative explanatory power, and survival (Lee, 1991). Lee (1991) further describes the theoretical requirements of positivism: theories must not only conform to empirical observations but should be falsifiable. For the second requirement, theoretical propositions must be related to one another. A given theory must also be able to explain or predict competing theory. Thus, a falsifiable, consistent, and explanatory theory should be able to survive through empirical tests. Levin (1988) argues that positivists believe in a stable reality that is observable and objective which others can easily repeat. The positivists believe that a

social science researcher is separated from the phenomenon being researched and research should be value-free. Positivist research is therefore a “systematic and methodological process” (Koch & Harrington, 1998, as cited in Walker, 2005) that emphasises “rationality, objectivity, prediction and control” (Streubert & Carpenter, 1999, p. 7). Factors extracted from these ideas of rationality and objectivity, and prediction and control comprised the methodological or instrumental positivism. Positivist advocates were concerned with abstracted empiricism based on quantitative methods, which were mainly numerical and subjected to statistical analysis (Duffy, 1987; Morgan & Smircich, 1980).

Positivism is rooted in atomism, quantification, and operationalisation. Atomism implies that a phenomenon exists as an entity separated from the whole world (experiments) with discrete elements. Quantification refers to the variables that can be expressed in terms of numbers and frequencies. This also uses mathematical tools to reveal significance for drawing conclusions. Operationalisation seeks to define social phenomena as simple behaviours and life experience (Lee, 1991; Salomon, 1991; Walker, 2005). This suggests that the epistemological perspective of any research defines its instruments of data collection and analysis.

However, it can be argued that the positivists’ idea about atomizing and quantifying social phenomenon in the society is flawed. Positivists fail to acknowledge that the world is fragmented with disorganised units that are distinct from each other and can only critically be understood through interactions. The variables do not have uniform characteristics. When clarifying the nature and quantity of phenomena, quantification may be useful in some cases. Social scientists, especially in political science, sociology, international relations, and so on are today robust with statistical research techniques. The nature and type of statistical instrument that is employed by a social scientist is informed by the kind of data to be collected.

Positivism also aims at measuring the variables of a social phenomenon through quantification. For example, a study could be conducted to measure the degree of success of a particular government policy on poverty reduction by considering whether the level of poverty increases or decreases. The quantity differences are employed statistically to determine variations among variables (Bourdieu & Wacquant, 1992) and why such variations exist. However, this is not the case with people’s behaviours which are complicated and dynamic. Lincoln and Guba (1994) argue that positivism has some limitations, which could be doused with the use of supplementary descriptive methods, such as the interpretivist methodology.

Positivism strongly maintains that methodological procedures of natural sciences are adaptable to social sciences. Social science research is value free and takes the form of causal laws when explaining social regularities and patterns. Their methodologies range from cross-sectional, experimental, and longitudinal studies and surveys. Logical positivism is recognised as the most important in the explanation of different phenomena and forms the basis for scientific evaluation where programmes and policies require realistic outcomes (Pawson & Tilley, 1997). Positivism produces highly specific and precise data. It provides interacting links between reality and “knowledge obtained from the links with independent assumptions underpinning it and methods used to obtain it” (Oliver, 1992, p. 106).

Despite its popularity, positivism has weaknesses that seemingly undermine its applicability to social science research. It oversimplifies the real world into experimental situations that is difficult to apply in reality. For instance, there is no organisation or community that is prepared to be experimented on. Positivism lacks detailed explanation of causes and processes of a research phenomenon, and their case studies are difficult to generalise, as they are often restricted to a single unit of analysis. It is important to emphasise that positivists use case studies in research-but with a difference. The difference lies in how they employ quantitative techniques and treat the case as a single unit of analysis detached from other variables of phenomena. It is also impossible to separate people from their social contexts and they cannot be understood without grasping their perceptions. Capturing complex phenomena in a single (or a few) controlled quantifiable variable(s) can be misleading since this imposes certain constraints on results and may neglect important findings (Weber, 2004; Keiller, 2005).

Cicourel (1964) and Kuhn (1961) argue that the weaknesses of positivism have paved the way for a new paradigm which suggests that “all knowledge is socially constructed and a product of particular historical context within which it is located” (Oliver, 1992, p. 106). Any social science research should endeavour to understand the meanings of phenomena, causes, effects and values developed within that social phenomenon. Interpretivism emerged as the new paradigm in response to the demerits of positivism. It is used for, for example, research on Human Poverty Index, livelihood, wellbeing, etc. (Chambers, 2006).

## **Interpretive Approach**

Interpretivism is a generic approach to social science research that comprises phenomenological sociology, philosophical hermeneutics and constructionist perspectives. They emphasise the examination of text to discover embedded meanings, how people use language and symbols to define and construct social practices in order to understand people's actions and behaviours. It draws on concepts that positivists ignore such as self “consciousness,” “freedom of choice,” (Checkland & Scholes, 1990; Hussey & Hussey, 1997; Newman, 1994) and meanings. The world is interpreted through trends and through the logic of situations, not the laws of social reality. It is easier to understand people's perceptions concerning their own behaviours (Hussey & Hussey, 1997) through a detailed and qualitative manner in pursuit of knowledge (Kaplan & Maxwell, 1994). This implies that interpretivists seek to understand knowledge based on social reality through detailed understanding and interpretation of meaning of events and specific life experiences.

Interpretivism uses research methods such as participant and non-participant observation to understand details of interaction in their context. They believe that social reality is based on subjective interpretation of actions. Natural scientists (positivists) could not depict the interrelationship between the researcher and the researched, since they deal with objects that are external to the researcher.

Interpretivists are also criticised for not being different from the positivists. They are criticised in terms of difficulties arising in establishing validity, reliability, and generalisations in social research. It is difficult to achieve these three aspects of empirical research. There are also concerns about the researcher's intrusion in the lives of the

participants as the interpretation, which rests within the researcher, could be biased. Interpretivists, however, argue that interpretations are part of scientific knowledge in their own right, although interpretation of reality depends upon the researcher. Although they emphasise meaning and interpretation of reality through understanding of behaviours and experiences of people, they tend to overlook the influence of natural environment on their subjects and research.

Interpretive research minimises these weaknesses through methodological *triangulation* of data collection. Although the interpretivists may not provide enough data for generalisations, they are able to establish the existence of a phenomenon through detailed analysis as required by the research objectives. Thus, a serious research work ought to be relevant to the research questions and should be applicable to the research setting. Quantitative research methods criticise interpretivists for being “soft science,” exploratory and subjective. Nevertheless, these criticisms fail to address essential issues raised by the interpretivist paradigm.

In view of the seeming shortcomings of interpretivism, it is important for any researcher to know that no single research methodology is intrinsically better than the other. Most authors have sought for a middle position (mixed approach) to research (Kaplan & Duchon, 1988). Benbast, Goldstein, and Mead (1987) argue that it is best to choose a context-specific methodology suitable for the problem under consideration and the researcher’s objectives. This means taking into consideration the complexities of the real world, such as the varied interests and different political settings and economic and socio-cultural conditions. Some complexities, for example, are critical dichotomies existing between urban and rural poverty, between factors influencing poverty among rural and urban areas, and so on.

## Critical Social Sciences

In order to understand and explain social phenomena we cannot avoid evaluating and criticizing societies’ own self-understanding. (Sayer, 1992, p. 39)

The critical social science (CSS) perspective emerged as an alternative paradigm to positivist and interpretivist approaches. CSS views the social world in terms of historical context and is action - and reflexivity-oriented. Reflexivity refers to the capacity to locate one’s research within a similar and justifiably acceptable framework to be used in the course of a research exercise (Eakin, Robertson, Poland, Coburn, & Edwards, 1996). In this context, a researcher should assume an evaluative stance and critically analyse how social and cultural history shape his research phenomenon. The critical social science concurs with the interpretivist paradigm that social science is not value-free although differs from interpretivism in the view that everything is relative and nothing is absolute (Kaplan & Maxwell, 1994). Interpretivists view reality as determined by the values of the people concerned, whereas CSS argues that “research is a moral-political activity that requires the researcher to commit to a value position” (Newman, 1994, p. 7). The issue of values perhaps underlines the consideration of ethics in any social science research.

The CSS approach also agrees with the interpretivist approach on the fact that the social world has conditions that require interpretation based on meaning, values and theory. The critique implies that by thinking and acting upon the world, researchers and practitioners are able to contribute to knowledge that will change both the subjective interpretations and objective conditions (Eakin et al., 1996). The interpretivists concur with the critical social science approach on this point, when they argue that the conditions or facts are determined by created meanings, which people consider as facts. The positivists in contrast argue that the social world is determined by neutral facts agreed on by people. However, the question that remains unanswered and CSS does not address is how one can distinguish one research problem from another if a researcher has to assume a reflective posture in social research. Hence, Eakin et al. (1996) argue that it is incumbent upon researchers to identify the theoretical assumptions underlying the perspectives of their studies.

The CSS approach is less common and is a new methodology that is developing among researchers and lacks empirical evidence for application as compared to positivists and interpretivists (Newman, 1994). There are also fewer opportunities to redefine the research problem or that freedom to critique as academics in CSS as it is more action-oriented. However, funding organisations and employers prefer CSS, since they are interested in action-based studies and findings.

### **The Tensions of Two Separate Worlds: Qualitative and Quantitative Methods**

Before examining the extent of the “false dichotomies” (Read & Marsh, 2002; White, 2001) between qualitative and quantitative research methods, it is essential to explain each on its own merit and in relation to its utilities in poverty studies and research. The imagined and/or “false dichotomies” between qualitative and quantitative methods lay the foundation of the tensions in poverty research. This tension was unequivocally identified by Kanbur (2001a) as follows:

Poverty analysts in the “Qualitative” and in the “Quantitative” traditions have been highly active in the policy debates of the past decade. While quantitative approaches have been dominant, especially in policy-making circles, the use of qualitative approaches has been increasing.... There have also been increasing attempts at integrating the two approaches. .... While there is a general acceptance, at least at the level of rhetoric, of the obvious complementarities between the two approaches, the tensions are more than apparent. The situation has undoubtedly improved compared to a decade ago, but practitioners in the two traditions still seem to inhabit unconnected worlds, with their own conferences, their own academic journals, and separate departments of (the same) aid agencies who sponsor their work. The main point is that practitioners do not seem to talk to each other as much as they ought to, given the common objective of helping to develop sound poverty reduction strategies. (p. 3)

This is the tension. This is the problem. Qualitative and quantitative researchers talking to each other seem the only way to begin to address the problem of dichotomies and

appreciating the complementarities thereof. However, to further understand the tensions and identify areas of arguable complementarities, it is important to examine each methodological approach on its own merits and limitations. Nevertheless, the discussion here is by no means aiming to show that one approach is better than the other. This is because the choice of any method should depend on what a researcher is trying to find out (Silverman, 2000).

By way of conceptualisation, qualitative method or research, according to Silverman (2000) is one that downplays statistical techniques and the mechanics of the types of quantitative methods employed in, for example, survey research. Broadly, qualitative method is a generic term denoting a range of techniques, such as observation, participant observation, interviews, focus groups, etc., which seek to understand the experiences and practices of key informants and to locate them within their settings and context (Devine, 2002). Qualitative method is more easily described than defined. It is a research method that deals very little with numbers. Despite countless attempts to define the term, qualitative method seems to defy a single definition. Any additional attempt creates conflict. This is because in the words of Ritchie and Lewis (2005), the term qualitative method is used as an overarching category covering a wide variety of approaches and methods. Denzin and Lincoln (2000) provide one of the most cited definitions of qualitative method. According to them:

Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that makes the world visible. These practices ... turn the world into a series of representations including field notes, interviews, conversations, photographs, recordings and memos to the self. At this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them. (p. 3)

The distinguishing features of qualitative research method is its emphasis on a naturalistic, interpretive approach as a way of understanding the meanings individuals attach to phenomena based on their actions, beliefs, values, decisions, etc. within their social contextualities. It is also distinguished by its emphasis on the use of non-statistical data and arrival at non-statistical conclusions. Although in general terms qualitative research methods are applicable across social sciences, their usage is determined largely by the nature of research phenomena. In other words, technical variations exist in approach, methods, procedures, etc. amongst students of economics, political science, sociology, anthropology, development studies etc. in their use of qualitative research methods.

Thus in developmental terms, students of poverty would define qualitative research methods differently. For example, Kanbur (2001a) notes qualitative research in poverty to be a method of data collection and analysis, which is based on:

[...] non-numerical information, which are specific and targeted in their population coverage, which in their design require active involvement

from the population covered, which use inductive methods of inference and which operate in the broad framework of social sciences other than economics. (p. 7)

McNabb (2004) similarly stresses that qualitative research is a method of a nonstatistical form of inquiry, techniques and processes employed to gather data on any poverty issue. Thus such data are collections of words, symbols, pictures, artefacts, etc. that are relevant to the social group under study. By this token, qualitative research methods can be employed in the study, measurement, and analysis of poverty. This is especially so in participatory poverty studies (Chambers, 2001b). The main instruments of data collection in qualitative research methods are: (a) observations; (b) in-depth unstructured interviews; (c) focus group; (d) narratives; and (e) documentary analysis. The strategies of methodological inquiries are: (a) grounded theory; (b) case study; (c) phenomenology; and (d) narratives (Creswell, 2009).

In poverty research as indeed in the extended social science family, qualitative research has the features and strengths of:

- a. Providing an in-depth and interpreted understanding of social poverty issues to researchers by learning about their social and material circumstances, their experiences, perspectives, and histories of poverty;
- b. Samples that are small in scale and purposively selected on the basis of salient criteria of measuring the causes, consequences and dimensions of poverty;
- c. Data collection methods which involve close contact and interactions between the researcher and the researched and which allow explorations of the policies and programmes of poverty issues;
- d. Data which are very detailed, rich and extensive to allow for more understanding of the scale, relativity, absolutism, and implication of poverty reduction policies and strategies;
- e. Analysis which is open to emergent concepts and ideas and which produces detailed descriptions and categorisation, establishes patterns, typologies, and explanations concerning people's interpretation of the social world of poverty;
- f. Findings which focus on the interpretations of social meanings through mapping and representing the social world of the researched (see Ritchie & Lewis, 2005);
- g. Exploring new, uncharted territory or new ways of looking at the old territory;
- h. In-depth understanding of subtle nuances, or a complex, dynamic phenomenon;
- i. A holistic picture for restoring perspective to the issue under investigation;
- j. Getting the *emic* perspective (insider's view) – cf. *etic* perspective (outsider's view). This is because *emic* perspective is likely to be very different from the external observer's;
- k. Digging into emotions and feelings in order to answer why questions; and
- l. Getting a handle on any poverty issues with no obvious starting place – exploratory.

Based on the above, apologists of qualitative research methods would tend to strongly argue that it offers the *best* approach and designs for poverty research and studies. This is because the questions of poverty are issues of contextualities - individual, society, country, policies, strategies, and programmes which would only be understood through interpretation. However, quantitativists would criticise this methodological approach as subjective. In fact, Devine (2002) argues that qualitative research method is affected by (a) crisis of representation which questions the expert status of the researcher in that "truth is contingent and nothing should be placed beyond the possibility of revision" (Williams & May, 1996, as cited in Devine, 2002, p. 202); (b) crisis of legitimation arising from rethinking the concepts of validity, reliability and generalisability; (c) it is impressionistic; (d) piecemeal; (e) idiosyncratic; (f) too biased and lacks objectivity in the collection and interpretation of data.

Comparatively, quantitative research is an empirical research where the data are in the form of numbers (Punch, 2004). Quantitative research employs the language of numbers, the syntax of mathematical operations and represents data in numerical values (Abbas, 2006). Bryman (1988) stresses that:

Quantitative research is ....a genre which uses a special language .... [similar] to the ways in which scientists talk about how they investigate the natural order – variables, control, measurement, experiment. (p. 12)

In the same vein, quantitative research method employs statistical tools in the collection and interpretation of data. Quantitative methodologists believed that research can only be done by statistics and statistical methods. Quantitative research is therefore seen as more representative and reliable. Its emphasis on systematic statistical analysis helps to ensure that findings and interpretations are robust (Devine, 2002). It is a research method that is deeply rooted in positivism and their epistemological orientation. Similarly, quantitative research denotes collection of observations and measurement of repeated incidences of social phenomena, such as incidences of crime, household poverty, voting for a political party, and so on. The idea is that by observing variables over a large number of cases, it is possible to make inferences about a particular social phenomenon (John, 2002), such as level of poverty among households in a particular society, who benefits from poverty intervention programmes, or who benefits from government social welfare policies. The argument being advanced here is that with large samples social science researchers can confidently make generalisations about the empirical world. Statistical theory, according to John (2002) demonstrates that the larger the number of cases or samples, or the greater the number of samples in relation to the whole population, the better and the surer the findings. John (2002) further argues that quantitative researchers help their counterparts to adequately attack them because:

They report complex statistical analysis as though they had run their data through a "black box." making knowledge of the technique a necessary prerequisite to understanding the article. (p. 217)

Often collecting, presenting and analysing data and findings in purely statistical forms does not help non-statistical specialists understand the logics of quantitative analysis. The

implication of this will be summary dismissal of such research by qualitative researchers. In any case, like qualitative research, quantitative methods have also come to stay and to continue to shape social science discipline across all its spectrum of knowledge. In this context, the quantitative approach to poverty measurement and analysis is defined as one that traditionally employs random sample surveys and structured interviews to collect mainly quantifiable data and analyse it using statistical techniques (Kanbur, 2001a). The main features of quantitative research methods are that:

1. It aims to classify features, count them, and construct a statistical model in an attempt to explain what is observed;
2. A researcher knows exactly what he/she is looking for and where to get it;
3. It is employed during latter stages of research;
4. All stages of the research are carefully designed before data is collected;
5. It employs instruments such as questionnaires, or equipment to collect numerical data;
6. Data are in the form of numbers and statistics;
7. It seeks precise measurement and analysis of target concepts, such as use of survey, questionnaires, etc.;
8. Quantitative data is more efficient. It helps to test hypothesis accurately; and
9. It is value-free and objective.

Broadly speaking, quantitative researchers are those who:

1. Believe in ontological and epistemological assumptions of the positivists;
2. View social science as analogous to natural science and aim at establishing causal explanations and followed scientific laws of establishing relationships between the social phenomena being investigated;
3. Focus on describing and explaining behaviour rather than describing meanings of social phenomena;
4. Adopt a deductive approach in using a theory to generate hypotheses and test them empirically; and
5. Deal with large amount of data which are subjected to statistical techniques of analysis (Read & Marsh, 2002, pp. 231-248).

In spite of its distinguishing strengths, quantitative research methods are attacked for their lack of rigour, ignoring the reality of the social world of the researched, lying with figures and numbers, neglecting socio-cultural contexts of phenomena, employing ad hoc procedures in defining, counting and analysing variables, as numbers themselves need qualitative explanations, and so on. For instance, numbers do not provide any detailed explanation of a research phenomenon. Even where numbers are used, they need qualitative explanation to adequately flesh them out. While qualitative research tends to take the socio-cultural settings and orientations of research objects on board, quantitative research hardly does it this way. Silverman (2000) sharply stresses that quantitative research suggests a “quick-fix” for the following reasons: it (a) involves virtually no

contact with the participants; (b) statistical correlations might be only based on variables that are arbitrarily defined; (c) it relies on after-the-fact speculation of the meaning of correlations; (d) unperceived values may creep into the research due to over-dependence on measurement; and (e) over-reliance on the test of hypotheses can make the development of hypotheses a trivial matter and consequently fail to help in generating hypotheses from the data.

Obviously, treating qualitative and quantitative research methods both theoretically and in application for the study of any social science phenomena as two separate entities would create serious seemingly irreconcilable tensions. Each of them has its major strengths and weaknesses. Counting on the strengths of one research method might not necessarily nor completely negate its weakness, nor would it utilise the strengths of its counterparts. In other words, no amount of qualitative techniques would address the utility of quantitative research and vice versa. In fact, based on this understanding most empirical research today has acknowledged the two methods' indispensable role in social science and can best be combined to an advantage (Read & Marsh, 2002). This is highlighted by the fact that the contemporary debate about the dichotomy between the two methods is not only shallow but also waning and based on stereotypes of the research process (John, 2002).

### **The False Dichotomy: Combining Approaches for Complementarities in Poverty Research**

One of the troubling aspects for most students of social science is the selection of the most appropriate and suitable methodological approach for their individual researches. Secondly, the inherently *false dichotomy* naively publicised by students and practitioners of qualitative and quantitative approaches would make such a selection by novice researchers increasingly difficult. Bryman (1988) contends that even though differences exist between the two approaches, researchers have tended "to create a somewhat exaggerated picture of their difference and theoretical irreconcilability" (p. 93). Understanding one's ontological and epistemological position and its empirical application would suggest that such a dichotomy does not necessarily play to the advantage. What even further demonstrates the falseness of the so-called dichotomy is in the nature of social reality. For example, to understand and to capture the diversity and complexity of poverty within countries, a wide range of data must be collected from conventional and participatory sources. This is because different indicators would have different and complementary uses in the identification of poverty and planning. For instance, objective income or consumption measures could be used to give a picture of the extent of poverty at a national level and could also be aggregated internationally for comparative studies. Thus for analysis and detailed planning, more qualitative measures and participatory approaches would be the most suitable. Importantly, measuring poverty is never the same as understanding why poverty occurs (Maxwell, 1999). Thus, to measure and to understand the causes of poverty, evaluate poverty eradication policies, etc., both qualitative and quantitative approaches are simultaneously suitable and appropriate.

Poverty issues are complex and therefore need a combination of methods and instruments for robust measurement and analysis. Given the increasing usage of the

combination of qualitative and quantitative approaches, today there is a general drive towards complementarities as a way of dousing the tension created by the *false dichotomy* and maximising the utility of the two approaches. Creswell (2009) observes that today with the development and perceived legitimacy of the two approaches, mixed methods has now gained wider popularity. He noted:

This popularity is because research methodology continues to evolve and develop, and mixed methods is (sic) another step forward. Also, the problems addressed by social and health science researchers are complex, and the use of either quantitative or qualitative approaches by themselves is inadequate to address this complexity.... Finally, there is more insight to be gained from the combination of both qualitative and quantitative research than either form by itself. Their combined use provides an expanded understanding of research problems [and help to address them comprehensively and adequately]. (Creswell, 2009, p. 203)

Although social science research could be conducted using any of the two approaches separately, in employing mixed method approach the challenge to poverty researchers is to define and to design their research using a combination of quantitative and qualitative approaches. The best starting point is to ask the question “to what extent, and in what contexts, we can have the best of both worlds with these approaches and methods” (Chambers, 2001b, p. 26). Indeed, the numbers are needed for representativeness and credibility, and the insight for relevance and realism. Accordingly, the quantitative approach shall be used in poverty research because of the following:

1. Time series comparisons to identify trends in whatever dimensions are measured, cross-section comparisons between different individuals, households, groups and communities, and across regions, countries and continents;
2. Correlations which identify associations which raise questions of causality and covariant changes;
3. It estimates of prevalence and distributions within populations and areas;
4. Triangulation and linkages with qualitative data;
5. The credibility of numbers in influencing policy-makers;
6. The utility to policy-makers of being able to put numbers on trends and other comparisons (see Chambers, 2001a);
7. It makes aggregation possible;
8. It provides results whose reliability is measurable; and
9. It allows simulation of different policy options (Kanbur, 2001b).

Similarly, a qualitative approach shall be employed in poverty research as it provides:

1. Richer data for the formulation and implementation of poverty policies and programmes;

2. Clear understanding of the multidimensionality and complexities of poverty issues;
3. Richer definition of poverty;
4. Insight into how individuals conceive and understand poverty;
5. Understanding the contextual nature of poverty and poverty policies;
6. More insight into causal processes;
7. More accuracy and depth of information on certain questions; and
8. Accurate evaluation of poverty policies.

The above mappings of the areas where and why qualitative and quantitative approaches could be used separately to study poverty provide insight to novice researchers. This should also help in understanding why the two approaches should be combined. Thus, the reasons for combining methodological approaches in poverty researches include: (a) using one method does not allow the researcher to address all aspects of the research questions and objectives; and (b) using a variety of methods may increase the validity of research as one method serves as a check on another (Read & Marsh, 2002). The major issue in combining is to note that the quantitative approach is about breadth while the qualitative approach is about depth. Thus, the three ways to combine the two approaches for complementarities in poverty research are: (a) integrating the quantitative and qualitative methodologies; (b) examining, explaining, confirming, refuting and/or enriching information from one approach with that from the other; and (c) merging the findings from the two approaches into one set of policy recommendations (Carvalho & White, 1997). In sum, the best way to conduct research on poverty is to understand and appreciate when, where, and how best to use exclusively qualitative research, quantitative research, or to combine them.

### **Concluding Notes**

Thus far, this paper highlights and examines the main thrusts of qualitative and quantitative approaches to the study of poverty. Until recently, the two approaches were critically opposed to each other, and this created a fundamental lacuna in comprehensive investigation and understanding of the complexities of social reality (research phenomena). The implication of these arguable drawbacks has been the creation and development of a “false dichotomy.” Thus qualitative researchers operated naively in a world seemingly and imaginatively different from that of the quantitative researchers. However, the very social phenomena being investigated and studied turned against the very researchers studying it. Consequently, social phenomena demonstrated that it were beyond the methodologies and instrumental forces of any one single approach – qualitative or quantitative alike to study and understand them in total. Social phenomena, therefore, turned into “monsters,” which only a “combined” research approach (of quantitative and qualitative methodologies) could be employed to tame the tensions created by the “false dichotomy.” Today, social science and indeed poverty researchers have not only come to accept mixed method approach but also appreciate its complementarities. However, this development does not negate the very utility of using individual research approaches separately *where necessary*. To achieve a safer landing, the choice of any methodological approach – qualitative, quantitative, or a combination

of the two (mixed method) by any poverty researcher should be as a matter of necessity guided by (a) the researcher's ontological and epistemological perspectives about social reality; (b) research phenomenon under investigation; (c) aims and objectives the researcher is seeking to achieve in a particular research exercise; (d) research questions; (e) hypotheses/assumptions; (f) theoretical framework of analysis; (g) time and resources disposable to the researcher; and (h) research audiences.

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